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Dkt. 66194-Z CCD

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellants: Paul Vincent Evans,
Theodor Rottwinkel and
Jeremy Mark Brown

Serial No. : 10/726,181

Group Art Unit 1742

Filed : December 1, 2003

Examiner J. Combs-Morillo

For : ALUMINIUM ALLOY SHEET

REPLY BRIEF UNDER 37 C.F.R. §41.41

This is appellants' Brief in Reply to the Examiner's Answer dated March 28, 2006, in the appeal to the Board of Patent Appeals and Interferences under 37 C.F.R. §41.31 from the final rejection of claims 1 - 10 of the above-identified application.

The present Reply Brief is directed to numbered section (10) at pp. 5-7 in the Examiner's Answer. The grounds of rejection set forth in numbered section (9) at pp. 3-5 of the Examiner's Answer have already been fully discussed in appellants' main Brief.

Responding to appellants' position that it would not have been obvious to use the grain-refiner-free ingot of Brusethaug et al. in the process of Sawada '827, the Examiner asserts (Answer, p. 6) that "appellant has not shown that the 'large' grains taught by Brusethaug lead to an inferior and streaky structure" and again (p. 7) that "appellant has not shown conclusive evidence that the sheet ingot without grain refinement taught by Brusethaug clearly results in an inferior lithographic sheet." Appellants respectfully submit that these statements do not correctly define the burden that they must bear to establish patentability. Rather, the question is, what would have been obvious to persons of ordinary skill in the art, from the teachings of the references, at the time the invention was made? Brusethaug et al. does not report that a lithographic sheet was produced from the described grain-refiner-free ingot and by inference, Brusethaug et al. did not in fact undertake to produce such a sheet from that ingot. Therefore, a lithographic sheet produced from the latter ingot is not in the prior art. Assuming *arguendo* that a lithographic sheet produced from the grain-refiner-free ingot would have been satisfactory if it had been made, nevertheless the question remains, would it have been obvious

to produce it? If not, the claimed method is patentable, regardless of what would have resulted if the unobvious combination of ingot and process had been made.

Brusethaug et al., standing alone, clearly implies that the use of grain refiners was conventional, and believed to be necessary, in the art. Concerned with eliminating or at least controlling fir-tree zone formation, Brusethaug et al. found that with no grain refinement, no fir-tree zone was formed; but the Brusethaug et al. exploration of other factors indicates that elimination of grain refiners was not deemed a practical solution to a fir-tree problem. Nowhere is this more apparent than in the first two paragraphs of the second column on p. 473 of Brusethaug et al., where, just after reporting the results of the investigation of the effect of grain refinement on the formation of fir tree zones, viz. that "The fir-tree zone was only observed in the ingot with a grain refiner addition" -- hence, that the investigational grain-refiner-free ingot did not have any fir-tree zone -- Brusethaug et al. states that "Casting speed and Fe/Si ratio are clearly dominating parameters regarding the fir-tree zone formation."

Moreover, Brusethaug et al., implicitly but clearly teaching that structural streaking can be the result of coarse grains, expressly declares that structural streaking is "*unacceptable* in offset" (p. 472, first column, Introduction; emphasis added). This statement in the disclosure of Brusethaug et al. plainly points away from subjecting the described investigational grain-refiner-free ingot to steps (rolling and electrograining) for producing a lithographic sheet. To repeat: in the face of such directly negative teaching, it matters not what *would* have happened if the investigational grain-refiner-free ingot of Brusethaug et al. had been rolled and electrograined to produce lithographic sheet; the critical point, for the issue of patentability, is that Brusethaug et al. effectively tells the skilled artisan not to do it.

Sawada '827 "is used by the examiner to teach the reduction of ingots into rolled sheet and further electrograining said sheet intended for printing plates, and is properly combined with Brusethaug for the motivation stated above" (Answer, p. 6). The "motivation stated above," however, is that which is assertedly supplied by Brusethaug et al., viz. the teaching that the investigational grain-refiner-free ingot has no detrimental fir-tree zone, in light of the asserted lack of "conclusive evidence that the sheet ingot without grain refinement taught by Brusethaug clearly results in an inferior lithographic sheet." But as explained herein, the disclosure of Brusethaug et al., taken as a whole, is to the effect that such a product of an ingot without grain refinement would be "unacceptable" for offset. This is the antithesis of motivation to combine Sawada '827 with Brusethaug et al. as the Examiner proposes.


What is lacking in Brusethaug et al. in this regard is in no way supplied by Sawada '827. As applied by the Examiner, Sawada '827 merely describes the normal processing steps of making lithographic sheet with DC casting as the starting point -- matters of common general knowledge.

To persons skilled in the art, Sawada '827 says nothing new about the conventional processing steps but teaches only two things, (a) tight control of Fe and Si content by using 99.7% pure aluminum and (b) that there should be no annealing treatment during or after cold rolling in order to retain strength. Both of these aspects are remote from the distinguishing features of the present invention as defined in the claims on appeal.

In addition, the Examiner has failed to really address appellants' argument regarding Fe levels, beyond observing that "the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference" but "Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art" (Answer, p. 6, second paragraph). With these propositions appellants of course do not disagree. Brusethaug et al. used an 0.26 wt% Fe alloy for the single, investigational grain-refiner-free ingot described. Sawada '827 teaches away from an Fe content above 0.20 wt.% (see col. 5, lines 41-47, and the examples, especially Tables 1 and 2 at cols. 9 and 10), and consequently, "the combined teachings of the references" would not have suggested, to those of ordinary skill in the art, the performance of the disclosed process steps on the Brusethaug et al. grain-refiner-free ingot containing 0.26 wt% Fe. On the other hand, even if it could be contended (which appellants do not concede) that the two references would have made obvious the performance of the process steps on an alloy that is grain-refiner-free and satisfied the Fe 20% upper limit of Sawada '827, that still would not make obvious appellants' claimed method, which has a lower limit of 25 wt.% Fe.


For the reasons set forth in appellants' main Brief, as augmented by the foregoing submissions, it is respectfully requested that the decision of the Examiner rejecting claims 19 - 26 be reversed, and that the claims be allowed.

Respectfully,


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I hereby certify that this paper is being deposited
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